of injury; and (3) that no feasible consumer product safety standard under the CPSA would adequately protect the public from the unreasonable risk of injury associated with these products. This rule applies to the banned hazardous products defined in §1304.3 and described further in §1304.4.

(c) Only consumer products are subject to this regulation. Patching compounds which are consumer products include those which a consumer can purchase. Merely labeling a patching compound for industrial use would not exclude such articles from the ban. If the sale or use of the product by consumers is facilitated, it is subject to the ban. Patching compounds which are labeled as, marketed, and sold solely for industrial use in non-consumer environments are not subject to the ban. In addition to those products which can be sold directly to consumers, the ban applies to patching compounds containing respirable freeform asbestos which are used in residences, schools, hospitals, public buildings or other areas where consumers have customary access.

### §1304.2 Purpose.

The purpose of this rule is to ban consumer patching compounds containing intentionally added respirable, free-form asbestos. These products present an unreasonable risk of injury due to inhalation of fibers which increase the risk of developing cancer, including lung cancer and mesothelioma, diseases which have been demonstrated to be caused by exposure to asbestos fibers.

## § 1304.3 Definitions.

- (a) The definitions in section 3 of the Consumer Product Safety Act (15 U.S.C. 2052) apply to this part 1304.
- (b) Asbestos means a group of mineral fibers composed of hydrated silicates, oxygen, hydrogen, and other elements such as sodium, iron, magnesium, and calcium in diverse combinations and are: Amosite, chrysotile, crocidolite, anthophyllite asbestos, actinolite asbestos, and tremolite asbestos.
- (c) Free-form asbestos is that which is not bound, or otherwise "locked-in" to a product by resins or other bonding agents, or which can readily become

airborne with any reasonably foreseeable use.

- (d) Patching compounds are mixtures of talc, pigments, clays, casein, ground marble, mica or other similar materials and a binding material such as asbestos which are sold in a dry form ready to be mixed with water, or such combinations in ready-mix paste form.
- (e) Consumer patching compounds are those that are customarily produced or distributed for sale to or for the personal use, consumption or enjoyment of consumers in or around a permanent or temporary household or residence, a school, in recreation or otherwise. The Commission considers that patching compounds for application in these consumer environments are either distributed for sale to or are for the personal use or enjoyment of consumers.
- (f) Intentionally-added asbestos is asbestos which is (1) added deliberately as an ingredient intended to impart specific characteristics; or, (2) contained in the final product as the result of knowingly using a raw material containing asbestos. Whenever a manufacturer finds out that the finished product contains asbestos, the manufacturer will be considered as knowingly using a raw material containing asbestos, unless the manufacturer takes steps to reduce the asbestos to the maximum extent feasible.
- (g) Initial introduction into commerce occurs when the manufacturer ships a product covered by this regulation from a facility of the manufacturer to a distributor, retailer, or user.

# § 1304.4 Consumer patching compounds as banned hazardous products.

On the basis that airborne asbestos fibers present the hazards of cancer, including lung cancer and mesothelioma to the public, consumer patching compounds containing intentionally-added, respirable free-form asbestos, which have been manufactured or initially introduced into commerce after January 16, 1978, are banned hazardous products. In addition, all other consumer patching compounds containing intentionally-added, respirable free-form asbestos, no matter when manufactured or initially introduced into commerce,

### § 1304.5

are banned hazardous products after June 11, 1978.

#### § 1304.5 Findings.

(a) The degree and nature of the risk of injury. The Commission finds that the risk of injury which this regulation is designed to eliminate or reduce is from cancer, including lung cancer and mesothelioma. In assessing the degree and nature of the risk of injury to consumers, the Commission has reviewed experimental data and human experience information. The Commission noted that in the scientific literature, there is general agreement that there is no known threshold level below which exposure to respirable free-form asbestos would be considered safe. Further, on the basis of such scientific opinion, it appears to the Commission that children are particularly vulnerable to carcinogens because of their longer potential lifetime and their rapid rate of growth. In areas of the country where asbestos may not be prevalent in the environment, the major risk of exposure for children and others may occur in the household. In areas of the country where more asbestos fibers are present in the environment, the public is exposed to additional risks from the presence of asbestos fibers in households and other consumer environments. The Commission concluded on the basis of these factors that consumer patching compounds containing respirable free-form asbestos present an unreasonable risk of injury to the public. In addition, a risk assessment was made. For purposes of this assessment, the Commission considered the use of patching compounds by the consumer, for six hours a day four times a year, to be a high yet reasonably foreseeable exposure. The increased risk of death from respiratory cancer induced by this exposure is estimated at between 10 and 2,000 per million. For five years of exposure at these levels, the risk increases geometrically and is estimated at between 1,000 and 12,000 per million. The lower estimate of 10 per million is closer to the actual risk for a one-year exposure. Nevertheless, in view of the seriousness of the injury and the cumulative effects of asbestos exposure, even this minimum figure represents an unacceptable risk.

The Commission believes that reducing exposure to respirable free-form asbestos in the home represents a substantial decrease in risk to consumers, since, for many people, the major exposure to inhalable asbestos is in the home.

(b) Products subject to the ban. Consumer patching compounds as defined in §1034.3 (d), (e), (f) includes such products as drywall spackling compounds and tape joint compounds (commonly known as "joint cement" or "tape joint mud"). The Commission estimates annual shipments of patching compounds subject to the ban at approximately 30-50 million "units," or individual packages, of various sizes from 0.5 to 25 pounds (dry) or 0.5 to 5 gallons (wet). The Commission believes that about half the patching compounds sold in 1977, and intended for sale to or use or enjoyment by consumers, were formulated with asbestos. Many others containing significant levels of asbestos contamination will also be affected by the ban.

(c) Need of the public for the products and effects of the rule on their utility, cost and availability. Patching compounds, though used primarily by commercial construction workers, are also used by consumers, and are used for the patching and sealing of cracks and joints in and around the household and in other consumer environments either by consumers or professional applicators. The compounds are used to cover areas on gypsum drywall which might otherwise be aesthetically undesirable or which might lead to structural damage, energy loss or lower property value. The asbestos in these compounds acts as a structural reinforcing agent which helps to reduce cracking and shrinkage of the compound over time, and which renders the compound more pliable or "workable" upon application.

(1) Utility. The elimination of asbestos from these products may result in the increased use or new development of substitutes which have similar properties to those of asbestos, or which impart similar qualities to the product. In current reformulations, asbestos is replaced by a combination of substances, of which the most common is attapulgite, a fibrous clay. Some non-